

Joint Depot Maintenance * Volume 002

CIRCULAR

Published for and about the Joint Depot Maintenance Community



JOINT SERVICE DEPOT MAINTENANCE CONFERENCE

Eighty-six DOD employees attended the three-day conference, which was held in San Diego.
(Photo by Cynthia Cox Underwood)
See story on page 7.

Telemaintenance

Computer-assisted repair becoming reality for Army

Tobyhanna Army Depot, Pa., has successfully demonstrated a new video/computer system that allows technicians to see communications-electronics components in the field.

This telemaintenance system makes coordination easier among Tobyhanna, logistics assistance representatives (LAR), and soldiers in the field. It lessens the time needed to troubleshoot and repair a system, which improves readiness. LARs help soldiers in the field to repair communications-electronics systems. The biggest goal of telemaintenance is to reduce the no-evidence-of-failure rate.

“Some of the circuit boards that come here have nothing wrong with them due to a misdiagnosis,” explained electronics engineer Anthony Caprioli. “Telemaintenance provides a way of confirming if components are really broken.”

“It saves time troubleshooting,” said electronics integrated system mechanic Joe Tomasello. “It’s easier for us to understand the problem and give instructions, if we can see the problem.”

Caprioli pointed out that telemaintenance increases the potential for substantial cost savings.

The telemaintenance system is composed of personal and belt computers (computers designed to be worn like a belt)

that are linked through the Internet by a wireless local area network. Tobyhanna technicians and LARs use the link to communicate directly with each other. The belt computers have small multimeters and oscilloscopes to help diagnose problems.

The basic concept is to link LARs in the field with each other and with Tobyhanna via computers with digital cameras.

“The LARs will be networked together to share their knowledge,” said Caprioli. “LARs oversee repairs, and each has his own specialty. If a LAR needs help with a system, he can contact another LAR who specializes

PUBLISHING AUTHORITY:
Publication of this circular is required by direction of the Joint Group on Depot Maintenance as stated in the mission of the Joint Depot Maintenance Activities Group (JDMAG). No special permission is required to quote or reproduce any article or brief in the *Joint Depot Maintenance Circular*. Submissions and inquiries are welcome. For information call (937) 656-2769/DSN 986-2769, or write to JDMAG/MAW, Building 280, Door 24, 4170 Hebble Creek Road, Wright-Patterson AFB, Ohio 45433-5653. Visit the *JDM Circular* on JDMAG's Web site at www.jdmag.wpafb.af.mil.

Cynthia Cox Underwood, editor



Staff Sgt. Michael Primanzon, U.S. Army Communications-Electronics Command's (CECOM) Readiness Directorate, and Roy Strauss (seated), Communications Systems Directorate, demonstrate part of the telemaintenance system to (from left) Larry Scheuble, Headquarters Army Materiel Command; Tony LaPlaca, CECOM Logistics Readiness Center; Eric Orisini, assistant secretary of the Army for logistics; and Paul J. Hoeper, assistant secretary of the Army for acquisition, logistics, and technology. (U.S. Army photo)

in that system. If they cannot solve the problem, then they contact Tobyhanna.”

The system was demonstrated to Paul Hoeper, assistant secretary of the Army for acquisition, logistics, and technology, last November. Staff Sgt. Michael Primanzon, U.S. Army Communications-Electronics Command (CECOM) Readiness Directorate, used the belt computer to call the High Tech Regional Training Site from the Tactical End Item Repair Facility to solve a problem. (Tomasello’s division was also involved in the demonstrations.)

“He also contacted Production Engineering’s video teleconferencing center from a tactical satellite terminal shelter,” Caprioli said. Both demonstrations worked fine.

The telemaintenance system has a computer chat room, an electronic drawing board, access to data schematics, and other features to make it more versatile. Also, its communications route is connected to the

Internet by a dedicated local area network. With five units now working, Tobyhanna will integrate telemaintenance computers into 2,800 shelters during a 15-year overhaul cycle.

Starting in 2002, the regular maintenance of ASM-146, 147, 189 and 190 communications-electronics shelters will be supplemented with the addition of telemaintenance computer equipment. They will have electronic technical manuals and inventory capability. LARs, soldiers, and Tobyhanna technicians in the field will be able to order parts online.

“We are already working with signal battalions to implement telemaintenance,” said Caprioli. “In 10 years, telemaintenance and its associated electronic logistics will be available throughout the Army.”

For information contact public affairs specialist Anthony Ricchiazzi, (570) 895-7557/DSN 795-7557.

Interservicing Highlight

The U.S. Army Environmental Center (USAEC) has teamed with coatings removal experts from the Army, Navy, Air Force, and the National Defense Center for Environmental

Excellence (NDCEE) in Johnstown, Pa., to demonstrate the Boeing Company's patented FLASHJET® coatings removal technology on military equipment. The technology allows removal of any coating from any surface with extraordinary precision, leaving no damage to substrates, no media intrusion, no corrosion potential, and almost no waste stream.

All this is important, because paint removal processes within the Department of Defense (DOD) generate large amounts of hazardous waste. Disposal costs for these wastes run into the millions of dollars per year, and repainting processes account for about 20 percent of all wastes listed in the Environmental Protection Agency's Toxic Release Inventory. DOD facilities must reduce waste by 50 percent, but continued use of current repainting processes makes this goal unrealistic. FLASHJET®, which uses a patented pulsed light known as xenon flash lamp combined with a frozen carbon dioxide process to significantly reduce disposal costs, appears to be the solution.

Sponsored by the Environmental Security Technology Certification Program (ESTCP), this technology is the result of years of extensive research. DOD and private industry have searched for quite a while to find environmentally compliant methods for removing layers of paint and other coatings from military equipment. In 1987 the Air Force evaluated xenon flash lamps for

DOD & industry agree on FLASHJET

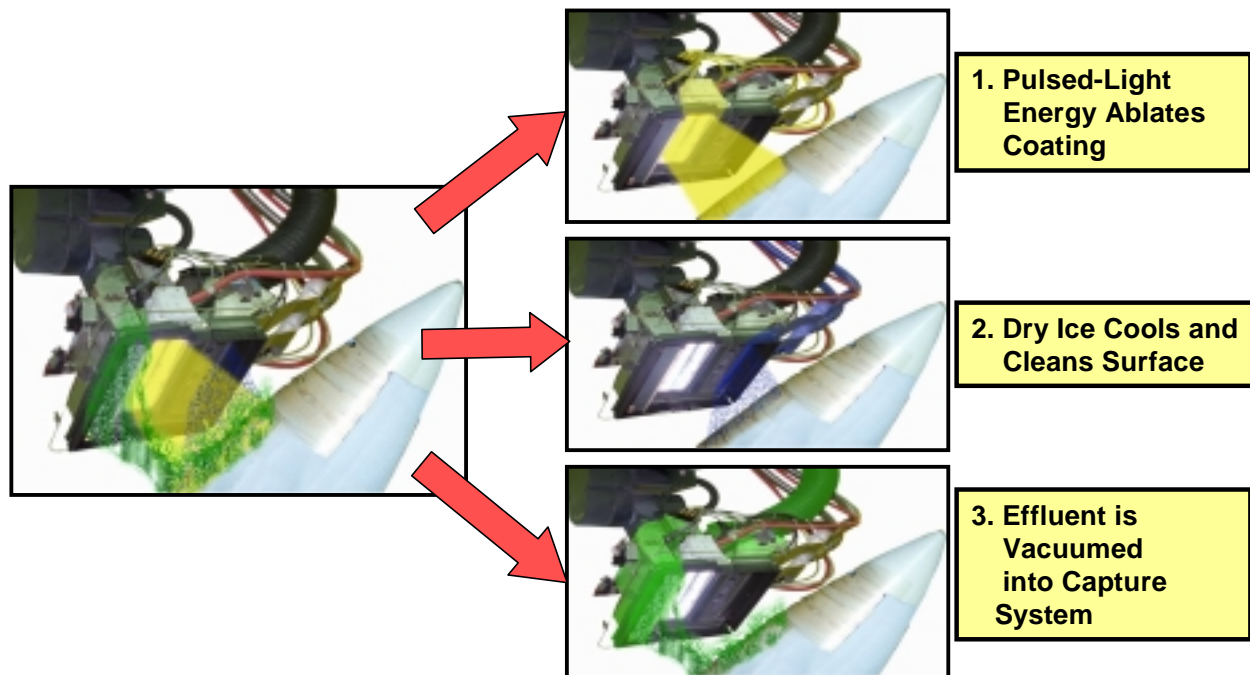
removing aircraft coatings at Sacramento Air Logistics Center, McClellan AFB, Calif. Three years later, Warner Robins Air Logistics Center (WR-ALC), Robins AFB, Ga., looked into using carbon dioxide pellet blasting to remove paint from metallic structures. Both processes were effective, but there were still concerns regarding the stripping of composite and thin metallic substrates. In 1991, a team of engineers from McDonnell Douglas Corp., Maxwell Laboratories, and Cold Jet, Inc., combined the technologies into the FLASHJET® process.

HOW IT WORKS

A xenon flash lamp, the primary removal agent in the process, directs high-intensity pulsed light energy at the coating and explodes it into a fine ash. A continuous stream of recycled carbon dioxide pellets cools and cleans the substrate, while forcing the effluent ash into a capture system. The capture system separates the ash and organic vapors, processing the ash into high efficiency particulate air (HEPA) filters and the vapors through activated charcoal. The only waste generated in this process is the spent HEPA filters, which are tested for hazardous waste characteristics and disposed of accordingly.

The system has a color sensor that allows it either to "skim" off very thin layers (less than 1 mil) of paint or strip to the substrate. In contrast, traditional stripping

FLASHJET® Coatings Removal Process



methods remove all layers of paint, including the primer. Since FLASHJET® removes only necessary layers of paint, its use results in 90 percent less hazardous waste than chemical or blast media stripping processes.

With FLASHJET® damage potential also drops, because the low-impact process won't harm chemical conversion coatings or the aerodynamic sealers and fillers. Except for plastic materials and transparencies, masking isn't required, nor is pre-cleaning or de-fueling the aircraft. Safe for use on all metals and composites, FLASHJET® has been approved by Naval Air Systems Command (NAVAIR) to strip all fixed wing aircraft.

In addition to being safer and more environmentally friendly, the fully automated FLASHJET® system is less time consuming than traditional methods, and it requires little maintenance. Those who work in coatings removal operations benefit dramatically as

they operate the system remotely from within a quiet, air-conditioned control room, where they aren't exposed to any hazardous media.

With its robotic stripping heads, the FLASHJET® system looks like some car wash machines. It reaches about 85 percent of an aircraft's surface, and scuff sanding handles any small unreachable areas. Meanwhile, a smaller stripping head is being developed so FLASHJET® can reach less accessible areas of an aircraft.

WHAT IT WORKS ON

The Air Force proved that FLASHJET® could remove coatings from delicate substrates and composites by testing it on boron and epoxy F-15 vertical stabilizers. In 1994 WR-ALC and Naval Aviation Depot (NADEP), Jacksonville, Fla., submitted a Strategic Environmental Research and Development

(Continued on page 6)



A T-45A aircraft undergoes the FLASHJET inside the new Coatings Removal Facility at Naval Air Station, Kingsville, Texas. (U.S. Navy photo)

(Continued from page 5)

Program (SERDP) project, entitled “Aircraft Depainting Technologies,” that further validated the FLASHJET® technology by testing it extensively on metallic and composite aircraft panels.

As a result, NAVAIR, led by the Lead Maintenance Technology Center for the Environment at NADEP Jacksonville, and the Becker Laboratory at Naval Air Warfare Center, Patuxent River, Md., approved the use of FLASHJET® on the Navy’s metallic fixed wing aircraft.

For the past two years, Naval Air Station (NAS), Kingsville, Texas, has been using the technology on the T-45 training system. According to Cmdr. Ken Graeser, T-45 assistant program manager for logistics, the Navy took advantage of the new technology, because the aircraft was due for depainting, and NAS Kingsville is an environmentally sensitive area.

“We looked for something that would fit into the environment and also meet the

needs of the program,” Graeser said. “The FLASHJET® system seemed like a match, particularly with the cost savings.”

Life cycle cost comparisons reveal that FLASHJET® offers substantial savings over more traditional methods of depainting aircraft. In addition to the cost benefits, FLASHJET® offers the best solution to complying with ever tightening EPA regulations and highly restrictive Occupational Safety and Health Administration standards.

After the successful SERDP tests, USAEC partnered with SERDP team members to bring Army depainting experts onto a tri-service project team, which will work with the NDCEE and Boeing to further validate FLASHJET® on military equipment. This ESTCP project will test FLASHJET® technology on rotary wing aircraft, including the UH-60, and off-aircraft components of the CH-53. The tests will include a high-cycle fatigue qualification, which will measure any effects of FLASHJET® on rotor blades. Ground vehicles, including the Bradley Fighting Vehicle, the High-mobility Multi-purpose Wheeled Vehicle, as well as the command and communications shelter also are slated for future FLASHJET® testing.

The process has been extensively tested on other types of substrates and composites during its short history at Boeing’s demonstration paint stripping cell in St. Louis and at NDCEE. Since 1996 Boeing has been using FLASHJET® to strip AH-64A Apache fuselages at the company’s facility in Mesa, Ariz.

For information contact the U.S. Army environmental hotline, (800) USA-3845/DSN 584-1699, or the Public Affairs department at NAS, Patuxent River, Md., (301) 757-6909/ DSN 757-6909, www.nawcad.navy.mil/pao.

Joint Service Depot Maintenance Conference

Services explore interservicing in the new millennium



Eighty-six members of the depot maintenance community discussed topics of interest, voiced their concerns on issues, learned about training opportunities, and shared information on future programs during the fourth biennial Joint Service Depot Maintenance Conference held recently in San Diego.

With a theme of "Interservicing in the New Millennium," the conference was hosted by the Navy Maintenance Interservice Support Management Office (MISMO). It included breakout sessions on

- ◆ Technology Information Exchange and Hot Technologies,
- ◆ Field Activity Support and Technology Transfer,
- ◆ National Center for Manufacturing Sciences, and
- ◆ Improving Depot Maintenance Interservicing Support Agreement Customer Service.

"This is my second conference," said Hal Carter, a Navy MISMO representative and conference host. "The opportunity to meet my colleagues, discuss issues, provide a forum to establish some dialogue, and exchange ideas has been invaluable."

Keynote speaker Rear Adm. Tony Lengerich raised the issue of what the world will be like in 2020 and how we can best prepare for it. According to the admiral, we are procuring fewer but very expensive and highly sophisticated weapon systems. Therefore, we will have to be extremely selective in deciding where those systems are

deployed. He feels that competition and global markets will be influential, and the trend toward international partnering to develop, procure, and manufacture interoperable systems will be a factor.

"The use of forward deployed forces and out-of-country technology and support capability," he said, "will help shape the future of our weapons support ... and, ultimately, determine the future of our organic depots."

Lengerich is the director of the Industrial Capability, Maintenance Policy, and Acquisition Logistics Division for the deputy chief of Naval Operations for Logistics.

For information contact Carter, (301) 757-3050/DSN 757-3050, or Anita Lopez, (301) 757-3052/DSN 757-3052.

AT A GLANCE (Page 7) Rear Adm. Tony Lengerich, keynote speaker. (Page 8: Clockwise) Navy employee and conference host Lee Lord addresses the audience. Headquarters Air Force Logistics Command employees Lt. Col. George Forest, Felicia Pressley, and Terry Patterson. Coast Guard employee Nancy Carson. Air Force employee Karen Jones. Army employee Virgil Wiley. JDMAG employees Paul Charron (Left) and Ron Swanson assemble briefing notebooks. (Page 9: Clockwise) Service representatives listen as Navy employee Bill Jimenez (Right) clarifies the depot maintenance interservice support agreement process. JDMAG employees Gary Smith (Left) and Steve Siens. Army employee Rilla Nameth. Air Force employees Ralph Cannon and Barbara Machenheimer. Navy employee and conference host Hal Carter. (Photos by Cynthia Cox Underwood) JDMAG employee Cynthia Cox Underwood. (Photo by Steve Siens)





JDMAG employee receives Meritorious Service Award

Mr. Kelly Blakely, a GS-13 logistics management specialist with JDMAG's Business and Technology Planning Division, received the Air Force Meritorious Civilian Service Award in recognition of his leadership and technical excellence.

Between Jan. 1, 1999 and Jan. 15, 2000, Blakely developed and implemented a course on depot maintenance capacity measurement to train employees at maintenance depots and the Services' logistics headquarters. The course resulted from an audit by the Department of Defense (DOD) Inspector General of the Services' implementation of DOD 4151.18-H, *Depot Maintenance Capacity and Utilization Measurement Handbook*.

So far personnel from the U.S. Army Materiel Command and the Army maintenance depots, Headquarters Air Force Materiel Command and the air logistics centers, Naval Air Systems Command headquarters and the naval aviation depots, Naval Sea Systems Command headquarters and the naval shipyards, Space and Naval Warfare Systems Command, and the Marine Corps Logistics Bases have completed the course.

While developing the training package, Blakely revamped the *Defense Depot Maintenance Council Business Plan (DBP)*. Now called the *Depot Maintenance Business Profile (DMBP)* to more accurately describe its purpose and content, the document pro-



JDMAG employee Kelly Blakely receives the Air Force Meritorious Civilian Service Award from Brig. Gen. Stanley A. Sieg, director of Logistics at Headquarters Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio. (U.S. Air Force photo by MSgt. Rickey Lawrence)

vides a comprehensive array of timely information on depot maintenance management, including legislation; Service management strategies; and workload, capacity, and personnel levels. This combined Internet and hard-copy publication is used by the Office of the Secretary of Defense and throughout the Services as a single source of depot maintenance information, often in response to Congressional queries.

Because of Blakely's efforts, a document that averaged two years in production is
(Continued on page 11)

Base uses aggressive pollution prevention principles

Tinker in top 10 for reducing toxics

According to the Environmental Protection Agency, Tinker Air Force Base, Okla., is among the nation's top 10 industrial and governmental agencies for eliminating toxic chemical releases.

The agency placed Tinker's Toxics Release Inventory Report on the list for successful toxic reduction.

"Undersecretary for Environmental Security Sherri Goodman uses Tinker as the example for getting rid of toxic chemicals," said Albert Napoli, director of Tinker's Environmental Management Directorate.

"Tinker's high-tech processes and innovative plant operations fall nothing short of cutting edge when it comes to cleaning up the environment and maintaining America's war birds," said Geri Hart, chief of Environmental Management in Tinker's Pollution Prevention Division. "Tinker's Toxics Release Inventory is well ahead of the Department of Defense goal for a 50 percent reduction set for 1999.

Protecting the environment, achieving compliance objectives, and reducing waste disposal costs are all at the center of Tinker's pollution prevention principles. Having achieved an 80 percent reduction for 1998, the base is dedicated to making significant reductions in the use of toxic chemicals, which are a part of weapon system maintenance.

Tinker's Oklahoma City Air Logistics Center (ALC) maintains more than 100 aircraft per year using approximately 500 industrial processes. The ALC uses many solvents and chemical processes under strict control to prevent unwanted release of toxic chemicals. Pro-

viding a detailed road map for hazardous chemical usage, the controls encompass an extensive inventory of chemical processes, tracking, and reporting.

"Tinker's successes in the environmental arena are driven by an aggressive pollution prevention goal to reduce, as near as possible, all hazardous discharges to zero in the year 2000," Napoli said. "As a result, Tinker's initiatives have succeeded in protecting the environment and preventing further pollution. The evolution of the pollution prevention initiative has played a major role in the Air Force's new emphasis on the compliance through pollution prevention concept."

Contact Brion Ockenfels, Oklahoma City ALC Office of Public Affairs, Tinker Air Force Base, Okla., (405) 739-2027/DSN 339-2027, for information.

(Continued from page 10)

now on track for annual publication. Information that can be easily obtained and published during the document's annual cycle will be available in hard copy, while more time-sensitive information will be updated frequently on JDMAG's Web site.

This Web-based approach reduces redundancy and saves time by allowing JDMAG to link to other sites that contain current information instead of the relying on hard-copy submissions from the Services. The new product also will lessen the burden on headquarters and depot personnel by speeding up coordination and limiting requests to essential data.

For information contact Tom Gorman, JDMAG, (937) 656-2780/DSN 986-2780, or

Defense Department presents Environmental Security Awards

In a recent Pentagon ceremony, Deputy Secretary of Defense Rudy de Leon congratulated 17 winners of the Defense Environmental Security Award for their outstanding achievements in several areas.

Cash awards ranging from \$1,000 to \$5,000 were given to installation personnel in recognition of their excellence in protecting the environment, supporting the defense mission, and implementing cost savings to the Defense Department.

Award recipients are listed below by category.

NATURAL RESOURCES CONSERVATION

- ♦ *Large Installation*—U.S. Army Training Center and Fort Jackson, S.C.
- ♦ *Small Installation*—Hawaii Army National Guard.
- ♦ *Individual/Team*—Fort McCoy, Wis.

CULTURAL RESOURCES MANAGEMENT

- ♦ *Installation*—Fort Riley, Kan.
- ♦ *Individual/Team*—Fort Irwin and the National Training Center, Calif.

ENVIRONMENTAL QUALITY

- ♦ *Industrial Installation*—Tobyhanna Army Depot, Pa.
- ♦ *Non-Industrial Installation*—Marine Corps

Base, Hawaii.

- ♦ *Individual/Team*—Navy Environmental Leadership Program Management Team, Navy Region Southwest, Calif.

POLLUTION PREVENTION

- ♦ *Industrial Installation*—Radford Army Ammunition Plant, Va.
- ♦ *Non-Industrial Installation*—HQ III Corps and Fort Hood, Texas.
- ♦ *Individual/Team*—Robert R. Tomlinson, U.S. Air Force Academy, Colo.
- ♦ *Weapon System Acquisition Team*—Logistics Environmental Team, Headquarters Air Force Materiel Command, Ohio.



RECYCLING

- ♦ *Industrial Installation*—Robins Air Force Base, Ga.
- ♦ *Non-Industrial Installation*—Grand Forks Air Force Base, N.D.
- ♦ *Individual/Team*—Ms. Suzanne Smith, Marine Corps Recruit Depot, San Diego.

ENVIRONMENTAL CLEANUP

- ♦ *Installation*—Elmendorf Air Force Base, Alaska.
- ♦ *Individual/Team*—Naval Weapons Station Yorktown, Va.

For information contact the Assistant Secretary of Defense Public Affairs Office, (703) 697-5737.